

### ABSTRACT OF THE DISCLOSURE

The present invention provides a method for removing a metal element effectively from a crystalline semiconductor film obtained with the use of the metal element, without increasing the number of processes.

- 5        In the present invention, an amorphous semiconductor film is formed on an insulating surface, a metal element for promoting crystallization is added to the amorphous semiconductor film, the amorphous semiconductor film is heated to form a crystallized semiconductor film, a continuous wave laser beam is irradiated to the crystallized semiconductor film, and an upper portion of the crystallized semiconductor
- 10      film is removed.